DATA CIPHERING AND DECIPHERING METHOD AND NETWORK SYSTEM USING THE METHOD

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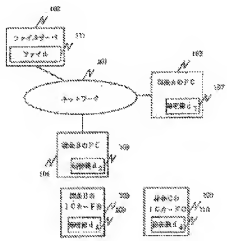
Abstract of **JP 11317734 (A)**

PROBLEM TO BE SOLVED: To obtain a secure and highly reliable secret distributing method by generating the common key of a common key cipher, ciphering information through the use of the ciphering and deciphering key, restoring the ciphering and deciphering key by a secret key belonging to each distributed secret holding person at the time of restoring the information, and restoring information through the use of the restored key. SOLUTION: A computer 103 generates the random number (k) of a bit length equal to the secret key and obtains an arithmetic result (x1 , y1) by arithmetic operation on an elliptic curve by an open key Q1 to the secret key d1 107 and the random number (k). A hash function (h) is applied to the arithmetic result (x1) to obtain a hash value h (x1), the data is ciphered with the value h(x1) as the deciphering and ciphering key and the ciphered data C is stored in the file 111 of a file server 102. At the time of deciphering, the (x1 , y1) are obtained by arithmetic operation on the elliptic curve through the use of the key of d1 107 and the function (h) is applied to x1 to restore a ciphering and deciphering key h(x1) and ciphered data C is deciphered by using the key h(x1) to obtain data M.



Data supplied from the ***espacenet*** database — Worldwide